

DTIC FILE COPY

D

REPORT DOCUMENTATION PAGE

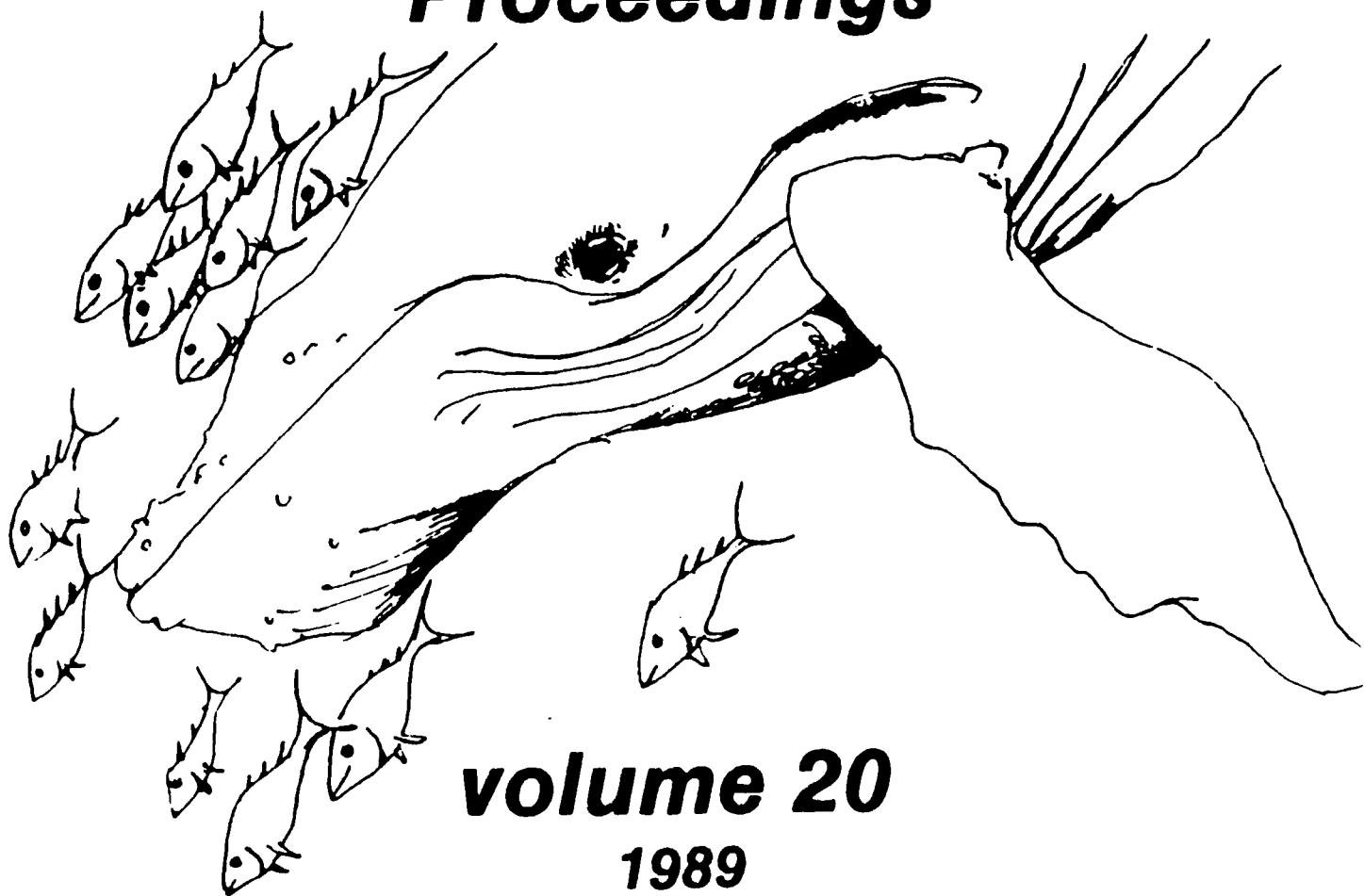
Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	December 1989	presentation/paper	
4. TITLE AND SUBTITLE		5. FUNDING NUMBERS	
ACUTE PHASE RESPONSE KINETICS OF THE DOLPHIN: DIAGNOSIS AND THERAPEUTIC CONSIDERATIONS		In-house	
6. AUTHOR(S)		8. PERFORMING ORGANIZATION REPORT NUMBER	
B. Fenwick and J. P. Schroeder			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)		9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	
Naval Ocean Systems Center San Diego, CA 92152-5000		Naval Ocean Systems Center San Diego, CA 92152-5000	
10. SPONSORING/MONITORING AGENCY REPORT NUMBER			
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT		12b. DISTRIBUTION CODE	
Approved for public release; distribution is unlimited.			
13. ABSTRACT (Maximum 200 words)			
<p>The acute phase response is a series of biochemical changes occurring in association with inflammation and/or tissue injury. The identification of patients experiencing an acute phase response has been a useful diagnostic technique in several species. Knowledge of the kinetics of the acute phase response allows estimation of the time course of an illness as well as to evaluate the success of a specific treatment regime. Similar information concerning the acute phase response in dolphins would be valuable. Sequential hematologic and biochemical changes that occurred following an acute phase response in dolphins were recorded.</p>			
<p>Acute phase responses were induced in adult male and female dolphins by a single intramuscular injection of a standard immunizing dose of a commercial <i>Erysipelothrix rhusiopathiae</i> vaccine mixed with an equal volume of penicillin. Biochemical and hematologic evaluations were performed prior to and for two to three weeks following the vaccination of three subjects.</p>			
<p>No changes were noted in the behavior or appetite of the subject dolphins during the course of the study. The only biochemical or hematologic changes identified were: (1) a decrease in total serum iron concentration and (2) an increase in erythrocyte sedimentation rate. The kinetics of these changes differed significantly. Total serum iron concentration increased before erythrocyte sedimentation rate increased and serum iron concentrations returned to pre-injection control values prior to normalization of the erythrocyte sedimentation rate.</p>			
<p>The data indicate that both total serum iron and erythrocyte sedimentation rate are sensitive and reliable indicators of the dolphin's acute phase response. The routine evaluation of these parameters can improve our ability to evaluate the time course and severity of inflammatory diseases as well as the effectiveness of medical therapy in dolphins.</p>			
Key units (SI) ✓			
Published in the <i>IAAAM Proceedings</i> , Vol. 20, 1989.			
14. SUBJECT TERMS			15. NUMBER OF PAGES
dolphins health			
16. PRICE CODE			
17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNLIMITED

IAAAM

Proceedings



volume 20
1989

EDITORS:

J. Pete Schroeder
Joy L. Leamaster

Naval Ocean Systems Center
PO Box 997
Kailua, HI 96734

ACUTE PHASE RESPONSE KINETICS OF THE DOLPHIN: DIAGNOSTIC AND THERAPEUTIC CONSIDERATIONS

Brad Fenwick DVM, MS, Ph.D. and J.P. Schroeder DVM

The acute phase response is a series of biochemical changes occurring in association with inflammation and/or tissue injury. The identification of patients experiencing an acute phase response has been a useful diagnostic technique in several species. Knowledge of the kinetics of the acute phase response allows estimation of the time course of an illness as well as to evaluate the success of a specific treatment regime. Similar information concerning the acute phase response in dolphins would be valuable. Sequential hematologic and biochemical changes that occurred following an acute phase response in dolphins were recorded.

Acute phase responses were induced in adult male and female dolphins by a single intramuscular injection of a standard immunizing dose of a commercial Erysipelothrix rhusiopathiae vaccine mixed with an equal volume of penicillin. Biochemical and hematologic evaluations were performed prior to and for two to three weeks following the vaccination of three subjects.

No changes were noted in the behavior or appetite of the subject dolphins during the course of the study. The only biochemical or hematologic changes identified were: (1) a decrease in total serum iron concentration and, (2) an increase in erythrocyte sedimentation rate. The kinetics of these changes differed significantly. Total serum iron concentration increased before erythrocyte sedimentation rate increased and serum iron concentrations returned to pre-injection control values prior to normalization of the erythrocyte sedimentation rate.

The data indicate that both total serum iron and erythrocyte sedimentation rate are sensitive and reliable indicators of the dolphin's acute phase response. The routine evaluation of these parameters can improve our ability to evaluate the time course and severity of inflammatory diseases as well as the effectiveness of medical therapy in dolphins.

Accession For	
NTIS GEN&I	
DOLC TAR	
Unannounced <input type="checkbox"/>	
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1 20	

